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ABSTRACT

The Chapter One Children's Art Carnival (C.A.C.) Creative Reading Program was designed to improve students' literacy skills through participation in creative arts activities integrated with instruction in reading and writing. Operating at sites in Manhattan, Queens, and the Bronx, the 1988-89 program served 334 students in second through fifth grade. Each student was involved in three types of sessions--an art workshop, a plan and review session, and a story room (small group) session. The impact of the program on student achievement in reading and writing was determined by evaluating students' performance on standardized and norm-referenced reading tests and holistically scored writing tests against the program objectives. Second grade students exceeded the program's criteria for success in reading: 97% of the students mastered 3 or more skills, 83% mastered 4 or more skills, and 69% mastered 5 or more skills. Third grade students did not meet the program's criterion for success. All mean differences for the fourth and fifth grade students were statistically significant and educationally meaningful. Students in grades 2, 3, and 4 achieved statistically significant mean gains on holistically scored writing tests. Overall, 52% of the students improved in writing, meeting the program's criterion for success. During the past 4 years, approximately one-half of the program participants attained five or more reading skills and approximately one-half to two-thirds of the program participants improved in their writing performance. (Nine tables of data are included.) (MG)

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OREA Report

EVALUATION SECTION REPORT

E.C.I.A CHAPTER 1
CHILDREN'S ART CARNIVAL
CREATIVE READING PROGRAM
1988-89

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EVALUATION SECTION REPORT

John Schoener, Chief Administrator

January 1990

EVALUATION SECTION REPORT

E.C.I.A CHAPTER 1
CHILDREN'S ART CARNIVAL
CREATIVE READING PROGRAM
1988-89

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CHAPTER I CHILDREN'S ART CARNIVAL
CREATIVE READING PROGRAM, 1988-89
EVALUATION SUMMARY

PROGRAM BACKGROUND

The Children's Art Carnival (C.A.C.) Creative Reading Program is a Chapter I program that served 334 elementary school students at a total of six sites in Manhattan, Queens, and the Bronx in 1988-89. The program was reorganized in the current year to include all participants for the full academic year and to service two new Bronx schools. The C.A.C. Creative Reading Program was designed to provide students with remediation in literacy skills through creative arts activities. Program activities included art workshops, plan and review sessions, and small group reading/writing instruction.

Student achievement objectives were established by C.A.C. staff. The reading achievement of program participants was measured differently for second, third, and fourth and fifth graders.

- Second graders mastered targeted numbers of skills on the Prescriptive Reading Inventory (P.R.I.) and thus met the program's criterion for success.

- Third grade student performance did not meet the program's criterion for success in reading. The mean difference (in Normal Curve Equivalents, N.C.E.s) between performance on the spring 1988 Metropolitan Achievement Test (MAT) and the spring 1989 Degrees of Reading Power test (D.R.P.) was not statistically significant.

- Fourth and fifth grade students' performance on the D.R.P. met the program's criterion for success in reading. The spring 1988 to spring 1989 mean differences (in N.C.E.s) were statistically significant and represented educationally meaningful effect sizes.

Tabulation of the number and percentage of students who increased in writing proficiency indicates that:

- Fifty-two percent of students participating in the program improved, thus meeting program objectives for writing performance.

Comparisons of mean gains in holistic writing scores between fall 1988 and spring 1989 indicate that:

- Overall, C.A.C students achieved a statistically significant mean gain in writing.

- The mean gains for grades two, three, and four represented moderate to large effect sizes.

Performance during the current year was compared to that of previous years. Reading was assessed by the P.R.I. from 1985-86 to 1987-88; approximately one-half of the students attained five or more reading skills each year. In 1988-89 the P.R.I. was used only to assess the performance of second grade students; two-thirds mastered five or more additional skills. Comparison of holistic writing skills indicated that during the past four years approximately one-half to two-thirds of the program participants improved their writing performance every year.

Interviews with artists and the reading teacher at the new Bronx sites revealed concerns about scheduling, contact with classroom teachers, the need for additional instructional materials, and the opportunity for one-on-one work with children.

Observations of C.A.C. activities indicated two problem areas. First, the reorganized format required each member of the C.A.C. staff to direct a group of children at virtually all times. Secondly, there was a great deal of variation in the participation of classroom teachers. Site observations also revealed that three different ways in which art and literacy training were related, including the use of literacy as an ancillary to an art project, the use of art as an ancillary to a literacy project, and a simple thematic relation between the two.

Recommendations for program improvement include the following:

- The program should establish formal staff development training sessions. Training should concentrate on the integration of art and literacy, the joint planning of lessons by artists and reading teachers, and teaching artists to teach reading and writing.

- The program should consider flexible scheduling to accommodate students who are frequently absent. Perhaps these students could be taught individually or in small groups on a pull-out basis.

- Program administered testing, possibly with the P.R.I., should be instituted to better assess third grade reading performance.

- More detailed direct teaching of writing skills should be implemented. This is especially important for students with rudimentary writing skills who need to learn to write better.

- An explicit statement of desirable classroom teacher participation should be made prior to the beginning of the school year; steps should also be taken to ensure good participation. Classroom teachers should be involved with planning themes for the school year. In addition, classroom teachers should be briefed before each C.A.C. lesson.

- Efforts to increase parental involvement should be enhanced. Current efforts should be supplemented with parent orientation sessions early in the school year, on-going encouragement of parents to visit their child's class, and workshops and take-home kits to assist parent-child reading at home.

- The new site in the Bronx should receive additional supplies and equipment so that its facilities are comparable to the other sites. Establishment of a library of attractive storybooks at this site should be a priority.

ACKNOWLEDGMENTS

The production of this report is the result of a collaborative effort of full-time staff and consultants. In addition to those whose names appear on the cover, Lois Freeman assisted with site observations and staff interviews, and Ilan Talmud analyzed the data upon which this report is based. Stan Davis edited the report.

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I. INTRODUCTION

PROGRAM PURPOSE

The Chapter I Children's Art Carnival (C.A.C.) Creative Reading Program is designed to improve students' literacy skills through participation in creative arts activities integrated with instruction in reading and writing. Secondary goals of the program are to facilitate children's abilities to express themselves and to motivate them to read and write.

STUDENT SELECTION CRITERIA

Students are eligible for Chapter I services if they live in a targeted area and score below a designated cut-off point on State-mandated standardized reading tests. For grade two, the test was the Metropolitan Achievement Test (MAT), and for grades three through six, it was the Degrees of Reading Power (D.R.P.) Test. The Chapter I Evaluation Reporting System specifies that eligible students may also be selected for Chapter I programs on the basis of classroom performance.

STUDENTS SERVED

Classes from elementary schools in Community School Districts (C.S.D.s) 3 and 5 in Manhattan (P.S. 123M and P.S. 208M), C.S.D. 23 in Queens (P.S. 105Q and P.S. 123Q), and C.S.D. 8 in the Bronx (P.S. 140X and 146X) participated in the 1988-89 Children's Art Carnival Program. A total of 334 students in grades two through five participated. One-third of the participants were in the third grade and one-fourth were in the fourth grade (see Table 1).

TABLE 1

Number and Percentage of Students
Participating in the Children's Art Carnival Program
by Grade, 1988-89

Grade	Number of Students	Percentage of Students
2	66	19.8
3	113	33.8
4	85	25.4
5	58	17.4
No grade[a]	12	3.6
Total	334	100.0

[a] Special education students are not placed by grade.

- One-third of the students were in the third grade.
- One-fourth of the students were in the fourth grade.

C.A.C. classes were assigned by the school principal and often included problem classes or classes with new teachers. During the current year, program participants included a GATES class and a MIS I special education class.

A large number of participating students were holdovers. Of the 275 participants for whom there was information, 18 percent (n=50) were holdovers. Over a third of the students in Queens and over a fifth of the students in Manhattan were holdovers; in contrast, only eight percent of the students were holdovers in the Bronx. Analysis of holdovers by grade indicated that one-third of fourth grade students and almost one-quarter of fifth grade students for whom there was information were holdovers.

PROGRAM OBJECTIVES

Specific student achievement objectives established by program staff were as follows:

- By the end of the 1988-89 school year, 65 percent of the students in grade two would master at least three additional reading skills on the posttest of the Prescriptive Reading Inventory (P.R.I.) that they had not mastered on the pretest; 50 percent would master at least four additional skills; and 25 percent would master five or more additional skills.
- Students in grades three through five would show statistically significant mean gains on standardized reading tests.
- Fifty percent of the students would increase their writing proficiency as measured by holistically scored writing tests.

EVALUATION METHODOLOGY

Evaluation procedures included on-site observations, interviews of program personnel at the new Bronx sites, review of program documents, and analyses of achievement test results. The following questions on the implementation and impact of the program were investigated:

- How is the program implemented?
- What are the perceptions of C.A.C. staff at the new Bronx site regarding the implementation of the program?
- Were the student achievement objectives for reading and writing met?

SCOPE OF THE REPORT

This report assesses the implementation and impact of the 1988-89 Chapter I Children's Art Carnival Creative Reading Program. Program organization and implementation are discussed in Chapter II. Students' outcome data are analyzed and interpreted in Chapter III. Conclusions and recommendations are presented in Chapter IV.

II. PROGRAM ORGANIZATION AND IMPLEMENTATION

PROGRAM BACKGROUND AND FUNDING

The Children's Art Carnival Creative Reading Program has provided Chapter I eligible students with integrated literacy and arts education since 1969. The program operates under the direction of the Board of Education's Office of Program and Curriculum Development. In 1988-89, the program was funded with a grant of $285,000 from the Educational Consolidation and Improvement Act (E.C.I.A.) Chapter I, Part A, Basic Grant Program.

Prior to the 1988-89 academic year, central art workshop sites in Manhattan and Queens served classes drawn from several school districts. The program was reorganized for the 1988-89 school year so that all program activities were conducted in the participating schools. The reorganization entailed conducting activities in a smaller number of schools than in previous years, while serving the same number of students and expanding student participation from 18 weeks for most students to a full academic year for all participants. Service to two schools in district 8 the Bronx was also added.

PROGRAM ORGANIZATION

Program activities were conducted at sites in Manhattan, Queens, and the Bronx. In each of the boroughs, the program operated in two schools. One school was a primary site, where

three classes were served. An additional class from another school was served in their home school.

At each site, one reading teacher and two artist-teachers provided reading and arts instruction, usually assisted by the classroom teacher. Overall, program staff included a program director, three reading specialists, six artist-teachers, a senior educational consultant, and an office associate.

Students participated in the program for a total of two hours and 50 minutes each week. Each student was involved in three types of sessions--an art workshop, a plan and review session, and a story room (small group) session. These sessions were offered either on the same day or on contiguous days. All program activities occurred in classrooms designated for program use in the participating schools.

Art Workshops

Art workshops offered three primary types of creative art activities: puppetry, print making, and ceramics. Professional artists led the workshop, and classroom and reading teachers assisted students. A class of approximately 25 to 30 students was divided into two groups and participated in the 90-minute art workshop each week.

Literacy skills and art were integrated with art activities through common themes, emphasis on sequential procedures, and reference to printed instructions. Participation in the art workshops was intended to complement the development of literacy

by encouraging development of symbolic processes, motivation, self-expression, and self-esteem.

Story Room (Small Group) Sessions

For each participating class, the reading teacher conducted several, usually four, story room (small group) reading sessions. These sessions were conducted in a pull-out mode, involving from five to seven students in each session. Students of similar ability were grouped together, and an attempt was made to individualize instruction. Each session lasted approximately 40 minutes.

Story room activities were related to the art workshops. In the small group sessions, stories were read and related to the featured theme, and students wrote about the theme and about their experiences. Other activities included reading aloud, playing reading games (e.g., rhyming, word lotto), and completing work sheets using particular reading skills.

Plan and Review Sessions

Plan and review sessions were designed to build on the art workshops with instruction in reading and writing skills. The reading teacher conducted this session, often with the assistance of artist-teachers and the classroom teacher. These sessions were offered to the entire class and lasted approximately 40 minutes.

During plan and review sessions, the staff and children discussed options for projects, developed these projects in groups, and reviewed their progress. Reading and writing

activities were emphasized. Children kept log books in which they recorded work plans and procedures.

PROGRAM IMPLEMENTATION

Site Observations

Two observations were conducted at sites in each of the three boroughs during the academic year for a total of six site observations. At each site, the OREA evaluator observed the three program components--the art workshop, the plan and review session, and the story room (small group) session in order to assess how the program was being implemented. In addition, the Bronx staff was interviewed to discover their perceptions of program implementation and their suggestions for program improvement.

Curriculum

Art Workshops. Art workshops were conceived as pedagogic only in a broad sense. They were primarily intended to motivate students and allow them an opportunity to experience personal accomplishment. At best, they flowed directly from plan and review sessions and elaborated on them.

In one session, the reading teacher announced that the art project and the story they would be reading in the afternoon were both about the wind. Having introduced the theme, the reading teacher encouraged students to contribute their ideas. Then, an artist demonstrated several examples of toys that twirl in the wind and talked about various ways to design them. Finally, students completed work sheets with multiple choice and fill-in-

the-blank questions referring to the project, materials used, and steps in the process. When most of the students had finished, the reading teacher went through the work sheet with them.

Story Room (Small Group) Sessions. Story room activities for small groups of four to six students were designed to be conducted by reading teachers; observations revealed that on several occassions these sessions were also led by artists. Plan and review sessions were intended to provide semi-individualized reading and writing instruction.

At one site, an OREA evaluator observed two story room sessions that were being conducted concurrently. In one group, students read a story aloud, and then the reading teacher asked, "Can you think of a better way to tell it?" The students were encouraged to write variations. In the other session, one artist helped children write short story captions for their art work while the other artist was working with a child who needed individual attention because of trouble at home.

At another site, an artist-led session began with a review of the group lesson on ecology. Then the artist initiated a discussion which introduced work on a diorama project. The other artist supervised a peer collaborative group doing research on the problem of waste disposal, as symbolized by the garbage barge, in preparation for work on their diorama. In a separate room, supervised by the reading teacher, students read a story out loud. Along the way, the reading teacher asked questions about particular words and the situation in the story.

Plan and Review Sessions. Plan and review sessions are intended to complement art workshop activities. The rationale was that pursuing a common theme in both sessions provided a motivating context for literacy activities. These sessions were conducted by an artist or a reading teacher. The whole class was usually addressed initially, and then two or three small groups were formed.

Sessions focused on either art techniques or themes. Art techniques were presented either as preparation for or at the conclusion of the creation of a piece of art. The discussion afterwards focused on why things were done in a particular way. This was often followed up with students writing in their logs about the art project. Sessions included discussion of tools and materials, collage, glazing, and overlapping colors. Themes included ecology, dinosaurs, the wind, fairy tales, and designing a school logo. At their simplest, the sessions involved reading a fairy tale aloud.

The relation between art and literacy varied. In one session, for example, literacy was ancillary to the art project. A discussion of dinosaur bones and fossils was followed by the distribution of step-by-step instructions on how to prepare and pour casts for ersatz fossils. It concluded with students preparing and pouring casts. In another session, the art project was ancillary to the literacy project. Artist-led groups created stories with the students contributing ideas about setting and

characters. Afterwards, they produced corresponding clay models. In other sessions, the focus was exclusively on literacy activities that were only thematically related to art projects. For example, group reading of a story about kites was followed by a discussion of "wind" words and what could happen to a kite. The class concluded with the children writing stories about a kite.

The Impact of Program Reorganization

As part of the reorganization of the program, art workshops were divided between two classrooms instead of having three separate workshops conducted in one room, as in the past. This change provided for a less hectic environment. Nevertheless, initial site visits revealed that the scheduling of all three program components was less than optimal. Informal discussions between the OREA evaluator and the program director resulted in some modification of the daily schedule to allow for a less fragmented day for students and a less frenetic changing of activities for the staff.

The ratio of adults to children was slightly lower than in previous years. In the past, a reading teacher and three artists had been present for the art workshop and story room sessions. The reorganization called for a reading teacher and two artists at each site. Furthermore, plan and review sessions replaced the whole class story room sessions of previous years. This required each adult to direct a group at all times and hindered one-to-one

attention. Thus, the opportunity for personal connections with children has been diminished.

In several instances, artists were expected to present a reading or writing lesson with minimal preparation, while the program description called for them to assist a reading teacher. The time allocated for daily staff meetings was typically used for resolving daily crises, preparing materials for art workshops, informally discussing problems with students, and the like. The kind of staff development that was needed did not occur.

Finally, there was a great deal of variability in the participation of classroom teachers. It was not possible to discern whether this variation was due to the individual personalities of the teachers or to differences between the sites.

STAFF PERCEPTIONS OF THE PROGRAM

Since the Bronx sites were newly established, the reading teacher and artists at this site were interviewed about the implementation of the program. Staff suggestions for improvements in the program were also elicited.

The reading teacher expressed the need for better instructional materials (e.g., story books) and better contact with classroom teachers to minimize the duplication of program and classroom activities. He also identified a need for more time and/or personnel to do provide students with more individualized attention.

The two artist teachers were interviewed together. They expressed concerns about the coordination of the art and reading portions of the program. Part of the difficulty was attributed to scheduling. At this site, the program had been implemented late so that the inclusion of C.A.C. activities in the class schedule sometimes resulted in art and reading sessions being disconnected in time. In describing how the program was actually implemented, they said that there was not enough time for the children to complete their art work, talk about it in a group, and then write about it in their logs. They noted that plan and review sessions could tie things together but they could also be redundant with the reading lesson.

Their suggestions for program improvement included allocating more time to meet with the reading teacher to coordinate lessons; more preparation time for setting out art materials and tools; and more discussion time with students to discuss how things learned in the classroom apply to the outside world. A final concern was the inclusion of fifth graders in the program. These staff members felt they are a different population than earlier grades; the program should consider beginning remediation earlier, perhaps as early as kindergarten.

STAFF DEVELOPMENT ACTIVITIES

The program coordinator had an orientation meeting with each participating classroom teacher. Two joint meetings of the Manhattan and Queens staff were held during the academic year at which staff presentations, discussions, and guest speakers

focused on improvement of instruction. Program staff also attended the annual Reasoning Skills Conference conducted by the Office of Program and Curriculum Development.

Staff development sessions were followed up by informal discussions throughout the year between reading teachers and classroom teachers. In addition, informal weekly meetings of the reading teacher and artists at each site concentrated on reading and writing instruction.

PARENTAL INVOLVEMENT

At the beginning of the school year, the parents of participating students received a letter describing the program and encouraging them to visit their children's classes and accompany them on field trips. In addition, the program participated in school open houses in the fall and spring. During each open house, an exhibition of the children's artwork was supplemented by the staff's discussion of how the program integrated art and literacy skills. Finally, the reading teacher interacted with the parents' organization at each school.

III. STUDENT OUTCOMES

ATTENDANCE

Mean student attendance in Children's Art Carnival Program components was 21.6 days for the art workshop, 19.2 days for the story room, and 21.9 days for the plan and review component (see Table 2). Mean rates of attendance in components of the program were 72, 59, and 67 percent, respectively. Fifth grade story room attendance was especially low.

METHODS USED TO EVALUATE STUDENT ACHIEVEMENT

The impact of the program on student achievement in reading and writing was determined by evaluating students' performance on standardized and norm-referenced reading tests and holistically scored writing tests against the program objectives.

- Students in second grade were expected to master a specific number of additional reading skills on the posttest of the Prescriptive Reading Inventory that they had not mastered on the pretest: 65 percent would master three or more additional skills; 50 percent would master four or more; and 25 percent would master five or more.

- For students in grades three through five, the objective on standardized reading tests--the Metropolitan Achievement Test (MAT) and the Degrees of Reading Power Test (D.R.P.)--was that students would achieve a statistically significant mean gain from pretest to posttest.

- On the holistically scored writing tests, 50 percent of program students were to increase their writing proficiency from fall of 1988 to spring 1989.

Reading Tests

On the Prescriptive Reading Inventory, tallies were made of the number of reading skills mastered by each student on the pretest and posttest, and the number of additional skills

TABLE 2

Mean Number and Percentage of Days Present in Components of the Children's Art Carnival Program by Grade, 1988-89

Grade	Number of Students	Art Workshop Mean Days	Art Workshop Mean Percent[a]	Story Room Mean Days	Story Room Mean Percent[b]	Plan & Review Mean Days	Plan & Review Mean Percent[b]
2	54[c]	20.4	68.1	19.9	61.1	21.8	67.0
3	96	23.4	78.0	21.3	65.7	23.3	71.6
4	81	20.0	66.6	18.7	57.4	19.9	61.2
5	42	21.9	72.8	14.2	44.0	22.9	70.4
Total	273	21.6	71.9	19.2	59.0	21.9	67.4

[a] The mean number of scheduled days of attendance was 30 days.

[b] The mean number of scheduled days of attendance was 32.5 days.

[c] For the Story Room component, the total number of students was 52.

- The mean rate of attendance was 71.9 percent for the art workshop, 59 percent for the story room, and 70.4 percent for the plan and review session.
- The mean rate of attendance for fifth graders in the story room was only 44 percent.

mastered by each student on the posttest was calculated. Frequency distributions were computed to identify the number of students who mastered additional skills.

On the standardized reading tests, students' raw scores were organized by grade and converted to normal curve equivalents (N.C.E.s).* Students in grade three took the MAT in spring 1988 and the D.R.P. in spring 1989. Scores on the D.R.P. (posttest) were converted to (pretest) MAT scores so that achievement could be measured.** However, since the MAT emphasizes basic skills and the D.R.P. emphasizes reading comprehension, the comparison may not be a good measure of student achievement.

Statistical analyses were performed on the N.C.E. scores. Correlated t-tests were used to determined whether mean gains were statistically significant. Statistical significance indicates whether the changes in achievement are real or have occurred by chance. However, it can be exaggerated by large sample size or depressed by small sample size and does not address the issue of whether the changes are important to the students' educational development. Therefore, an effect size

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*Normal curve equivalent scores are similar to percentile ranks but, unlike percentile ranks, are based on an equal-interval scale ranging from 1 to 99, with a mean of 50 and a standard deviation of approximately of 21. Because N.C.E. scores are equally spaced, mathematical and statistical calculations such as averages are meaningful; in addition, comparisons of N.C.E. scores may be made across different achievement tests.

** The equi-percentile method was used. The frequency distributions of scores on the tests were employed to generate conversion tables, which were approved by the State Education Department.

(E.S.)* is reported for each mean result to indicate the educational meaningfulness of each mean gain or loss.

Writing Tests

Student writing samples were obtained at the beginning and end of the program year. On both occasions, students were asked to draw a picture of a person doing something and then write a story about it.

Writing tests were organized by grade and holistically scored using a five point scale that measures how well a student communicates. Each writing test was independently scored by two readers who were asked to pay special attention to the coherence of the passage, its sentence structure and sequence, and the writer's awareness of the audience. A discrepancy of one point between readers was acceptable. However, discrepancies of more than one point required a third reader.

Inter-rater reliability was computed by comparison of two independent ratings of the 494 writing samples. Fifty-three percent of the papers received exactly the same score; 42 percent received scores that differed by one point. Thus, 95 percent of the ratings differed by one point or less, and only five percent (24 papers) required a third rater.

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*The effect size, developed by Jacob Cohen, is the ratio of the mean gain to the standard deviation of the gain. This ratio provides an index of improvement irrespective of the size of the sample. According to Cohen, .2 is a small effect size, .5 is a moderate effect size, and .8 is a large effect size. Only effect sizes of .8 and above are considered educationally meaningful.

After the tests had been scored and converted to N.C.E. units, correlated t-tests were used to determine statistical significance. Then, an effect size was calculated to determine the educational meaningfulness of these mean differences. Finally, in order to determine if program objectives for writing performance had been attained, the number and percentage of students who had increased in writing proficiency was computed.

ACADEMIC ACHIEVEMENT IN READING

Second Grade Students

Table 3 presents student achievement data on the criterion-referenced P.R.I. Students were pretested in fall 1988 and posttested in spring 1989. Student achievement was measured against the program objectives. Table 3 shows that

- Second grade students exceeded the program's criteria for success in reading: 97 percent, 83 percent, and 65 percent of the students mastered three, four, and five or more additional skills, respectively.

Third Grade Students

Table 4 presents student achievement data on standardized reading tests. Third grade students were pretested in spring 1988 on the MAT and posttested in spring 1989 on the D.R.P. Table 4 shows that

- There was a decrease in test scores from pretest to posttest and this difference was not statistically significant. Thus, third grade students did not meet the program's criterion for success.

TABLE 3

Number of Additional Skills Mastered
on the Prescriptive Reading Inventory
by Second Grade Students
in the Children's Art Carnival Program, 1988-89

Number of Skills Mastered	Number of Students [a]	Percentage of Students
2	1	3
3	5	14
4	5	14
5	8	23
6	8	23
7	6	17
8	1	3
9	1	3
Total	35	100

[a] Pretest and posttest scores were not available for 31 students.

- Ninety-seven percent of the students mastered three of more skills, exceeding the program criterion for success.
- Eighty-three percent of the students mastered four or more skills, exceeding the program criterion for success.
- Sixty-nine percent of the students mastered five or more skills, exceeding the program criterion for success.

TABLE 4

Mean N.C.E. Differences on Standardized Reading Tests
by Third Grade Students
in the Children's Art Carnival Program, 1988-89[a]

Grade	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	Difference Mean	Difference S.D.	Effect Size
3	76	38.8	10.5	37.9	14.8	-0.9	15.7	-0.1

[a] Spring 1989 D.R.P. scores were converted to MAT scores for comparison with the spring 1988 MAT.

- The mean difference was not statistically significant. It represented a small effect size.

Fourth and Fifth Grade Students

Table 5 presents student achievement data on the D.R.P. Students in fourth and fifth grade were pretested in spring 1988 and posttested in spring 1989. The new (1987-88) D.R.P. norms were used on the spring 1988 and spring 1989 test scores. Mean differences were calculated and measured against the program objective, a statistically significant mean gain. Table 5 shows that

- Students in both grades and overall achieved statistically significant mean gains of 11.3 N.C.E.s.
- Effect sizes were large and represented educationally meaningful gains.

ACADEMIC ACHIEVEMENT IN WRITING

Table 6 presents student achievement data for grades two through five on holistically scored writing tests which were administered in the fall and spring of the school year.

- Students in grades two, three, and four achieved statistically significant mean gains, thus meeting the program's criteria for success.
- The mean gain of second grade students represented an educationally meaningful increase.

Table 7 presents data on the number and percentage of students by grade and overall who increased their proficiency in writing.

- Overall, 52 percent of the students improved in writing, meeting the program's criterion for success.
- Except for grade four, more than 50 percent of the students in each grade improved their writing skills.

TABLE 5

Mean N.C.E. Differences on the Degrees of Reading Power Test by Students in the Children's Art Carnival Program by Grade, 1988-89[a]

Grade	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	Difference[b] Mean	Difference[b] S.D.	Effect Size
4	65	23.1	16.8	34.4	15.4	11.3	14.5	0.8
5	45	29.0	19.7	40.3	17.2	11.3	14.3	0.8
Total	110	25.5	18.2	36.8	16.2	11.3	14.4	0.8

[a]New 1987-88 D.R.P. norms were used on both the spring 1988 and spring 1989 scores.

[b] Mean differences were statistically significant at the $p \leq .05$ level.

- Mean differences for grades four and five were 11.3 N.C.E.s.
- All mean differences were statistically significant and educationally meaningful.

TABLE 6

Mean Raw Score Differences
on Holistically Scored Writing Tests
by Students in the Children's Art Carnival Program
by Grade, 1988-89

Grade	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	Difference Mean	Difference S.D.	Effect Size
2	33	3.1	1.5	5.0	2.2	1.9[a]	1.8	1.1
3	81	4.4	1.3	5.3	1.4	0.9[a]	1.5	0.6
4	64	4.7	1.7	5.6	1.5	0.9[a]	1.8	0.5
5	33	5.2	4.4	6.1	2.3	0.9	3.2	0.3
No Grade[b]	6	2.2	0.4	2.7	1.0	0.5	0.8	0.6
Total	217	4.4	2.3	5.4	1.8	1.0[a]	2.0	0.5

[a] The difference was statistically significant at $p \leq .05$.

[b] Special education students are not placed by grade.

- The overall mean gain was 1.0 raw-score points. This mean gain was statistically significant and represented a moderate effect size.

- The mean gains for grade two, three, and four were statistically significant and represented moderate to large effect sizes.

TABLE 7

Number and Percentage of Students
in the Children's Art Carnival Program by Grade
with Increased Writing Proficiency, 1988-89

Grade	Number of Students	Higher Posttest Scores	
		Number	Percentage
2	45	25	55.6
3	91	50	54.9
4	76	35	46.1
5	37	20	54.1
Total	249	130	52.2

- More than fifty percent of students overall and in grades two, three, and five improved their writing proficiency, thereby meeting the program objective.
- Only 46 percent of fourth grade students improved their writing skills and thus did not meet the program criterion for success.

Secondary analyses were conducted to determine the pretest performance characteristics of students who improved or did not improve. The median pretest scores for each grade, computed with the combined scores of the two independent raters for each student, were two raw-score points in grade two, four raw-score points in grade three, five raw-score points in grade four, and six raw-score points in grade five. The overall median was four raw-score points. Scores were partitioned at the median for subsequent analyses.

For grades three, four, and five, more students who scored below the median on the pretest improved than did students who scored above the median. The pattern for second grade students was different. Two-thirds of students with low pretest scores did not improve. Those students who did improve were almost equally divided between students who had high and low pretest scores. This pattern suggests that certain baseline skills are necessary for second grade students to benefit from the writing practice given. It also suggests that the instruction does not help students in higher grades progress beyond a certain point.

COMPARISON WITH PREVIOUS YEARS

Reading Tests

Table 8 presents data on reading achievement by students on the P.R.I. over the last four school years, 1985-86 through 1988-89. However, in 1988-89, the P.R.I. was used only to assess reading performance for students in the second grade. Students were pretested in the fall and posttested in the spring of the

TABLE 8

Number and Percentage of Students
in the Children's Art Carnival Program
Mastering the Targeted Number of Skills
on the Prescriptive Reading Inventory, 1984-85 through 1987-88

Year	Number of Students	Additional Reading Skills Mastered: Three or More N	Three or More %	Five or More N	Five or More %
1985-86	278	222	80	127	46
1986-87	245	223	91	111	45
1987-88	279	235	84	145	52
1988-89	35[a]	34	97	24	69

[a] In 1988-89, the P.R.I. was used only to assess reading performance for students in the second grade. In previous years, all grades were tested with the P.R.I.

- From 1985-86 through 1987-88, 80 percent or more of the students gained three or more reading skills.
- During this period, approximately one-half of the program participants attained five or more reading skills.
- In 1988-89, 97 percent of second grade students mastered three or more additional reading skills and two-thirds of second grade students mastered five or more additional skills.

relevant academic year. Results were calculated in terms of the percentage of students attaining three or more and five or more additional reading skills. Table 8 shows that

- From 1985-86 through 1987-88, 80 percent or more of the students gained three or more reading skills.
- During this period, approximately one-half of the program participants attained five or more reading skills.
- In 1988-89, 97 percent of second grade students mastered three or more additional reading skills and two-thirds of second grade students mastered five or more additional skills.

Writing Tests

Table 9 presents data on students' writing achievement on holistically-scored writing tests from 1986-87 through 1988-89. Students were pretested in the fall and posttested in the spring of the relevant academic year. Results were calculated and measured against the program objective that 50 percent of the students would increase their writing proficiency. Table 9 shows that

- During the past four years, approximately one-half to two-thirds of the program participants improved in their writing performance.

TABLE 9

Number and Percentage of Students
in the Children's Art Carnival Program
with Increased Writing Proficiency,
1985-86 through 1988-89

Year	Number of Students	Increased Proficiency	
		Number	Percentage
1985-86	222	106	48
1986-87	185	123	66
1987-88[a]	235	134	57
1988-89	249	130	52

[a] In 1987-88, a five point rating scale replaced the four point scale used in previous years.

- During the past four years, approximately one-half to two-thirds of the program participants improved in their writing performance.

IV. CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

During the 1988-89 school year, the Children's Art Carnival Creative Reading Program underwent a major reorganization. At the new sites in the Bronx, staff interviews revealed a problem that is largely attributable to the expansion of the program, an unequal distribution of supplies and equipment to the new site. In addition, site observations identified two continuing problems: uneven participation of classroom teachers and a lack of parental involvement in program activities.

The program's accommodations to budgetary constraints and the staff adaptation to a less than optimal schedule were laudable. However, scheduling problems made the C.A.C. experience appear to be fragmented. This situation improved somewhat during the course of the year but was not fully resolved. Furthermore, because of both staffing cuts and the schedule, the opportunity for personal connections between staff and individual children diminished.

Staff development training sessions could alleviate some of these organizational problems. Evaluators felt that staff training should prepare artists for their increasingly large roles in teaching reading and writing; address the need for increased coordination between artists and reading teachers; and the develop ways to better integrate the teaching of art and literacy skills. Lastly, it must be remembered that alleviation

of organizational difficulties is a means to improving student literacy skills.

Attendance emerged as a problem. In the most extreme case, the mean number of story room sessions attended by students in fifth grade was 14.2 out of a scheduled 32.5 sessions, which resulted in an attendance rate of 44 percent. High absenteeism is endemic in Chapter I populations, and this undermines the effect of remediation sessions. Evaluators felt that efforts should be made to reach more students more often.

Students performed well on tests measuring reading achievement. The reading performance of second, fourth, and fifth grade students met the program objectives. Fourth and fifth grade students achieved statistically significant mean gains in their reading scores, and second grade students acquired the required number of additional reading skills. However, third grade students did not meet the program objective.

The reading achievement of third grade students decreased from pretest to posttest, from 38.8 N.C.E.s to 37.9 N.C.E.s. Nevertheless, the mean decrease was not statistically significant, and both pretest and posttest scores were above the 35 N.C.E. threshold for educationally disadvantaged students. In addition, these students took the Metropolitan Achievement Test (MAT) in spring 1988 and the Degrees of Reading Power Test (D.R.P.) in spring 1989. Since the MAT emphasizes basic skills and the D.R.P. emphasizes reading comprehension, the comparison may not be a good measure of student achievement.

More than fifty percent of students in grades two, three, and four and overall improved their writing achievement, meeting the program's objectives. However, program objectives were not met by students in grade four as less than half of them improved in writing performance. Nevertheless, students in grades two, three, and four achieved statistically significant mean gains from pretest to posttest, and the mean gain of second grade students was educationally meaningful. Finally, fifth grade students did not achieve a statistically significant mean gain, and a large standard deviation indicates that there was a lot of diversity in individual student performance.

Secondary analyses revealed that in grades three, four, and five a large proportion of students who entered the program with poor writing skills improved, but relatively few students with moderate or better incoming skills improved. In second grade, this pattern did not hold: two-thirds of students with poor incoming skills did not improve. The pattern suggests that different kinds of writing instruction may be needed for children at different skill levels.

In conclusion, the 1988-89 academic year should be considered a transitional year for the program. Organizational and scheduling problems were recognized during the course of the year and initial steps were taken to address them. There are plans to continue these efforts and expand on them during the coming year.

RECOMMENDATIONS

The Bronx sites had facilities that were not comparable to the other sites. Few reading materials were available, there were relatively few art supplies, and there was no kiln in which to fire ceramics.

- The Bronx site should receive additional supplies and equipment. The establishment of a library of story books at this site should be a priority.

Often, there seemed to be ambiguity about what kind of classroom teacher participation was desirable. In addition, there is a need for improving the articulation of program activities and regular classroom instruction.

- Classroom teachers should be involved with the planning of themes for the school year. In addition, they should be briefed before each program lesson.

Current efforts to increase parental involvement are sporadic. Moreover, these efforts do not guide or support parents in assisting their children with reading at home.

- The program should initiate parent orientation sessions early in the school year and encourage parents to visit their child's class. In addition, take-home kits for parent-child reading at home should be considered.

There were problems with the integration of art activities and literacy skills and the coordination between artists and reading teachers. In addition, artists were frequently required to teach reading and writing but were given little time or support to prepare lessons.

- The program should establish formal staff development training sessions. Training should concentrate on the integration of art and literacy, the joint planning of lessons by artists and reading teachers, and teaching artists to teach reading and writing.

Attendance is low for reasons external to the program. Yet poor attendance decreases the impact of the program on students and contributes to the deflation of student achievement scores.

- The program should consider flexible scheduling to accommodate students who are frequently absent. Perhaps these students could be taught individually or in small groups on a pull-out basis.

Third grade students' reading performance decreased from pretest to posttest. It is not clear if the decrease was a result of using different tests for the pretest and the posttest or if it was an accurate measure of students' reading abilities. Nevertheless, the program must ensure that its impact on students' writing performance is positive.

- The program should eliminate the use of two separate tests to measure the reading achievement of third grade students and should consider using the P.R.I. The P.R.I. is used as a diagnostic test at the beginning of program participation, so only one additional test would be required.

Second grade students with few incoming skills did not demonstrate improved writing skills. Students in grades 3, 4, & 5 with incoming skills better than the average program participant in their grade did not improve in writing as much as students with less-developed skills.

- The program must recognize that teaching less-developed students to express themselves through writing is a different task than teaching more advanced students writing skills.

- More detailed, direct teaching of writing skills should be implemented. This is especially important for students who are able to write and need to learn to write well.